9a

14l (E)

$$R_1 = H \xrightarrow{a} 17$$
,  $R_1 = TBDMS$ 
 $R_1 = H \xrightarrow{a} 17$ ,  $R_1 = TBDMS$ 
 $R_1 = H \xrightarrow{a} 17$ ,  $R_1 = TBDMS$ 
 $R_2 = R_3 = CH_3$ 
 $R_2 = R_3 = CH_3$ 
 $R_2 = R_3 = CH_3$ 
 $R_3 = CH_3$ 
 $R_4 = R_2 = R_3 = TBDMS$ 
 $R_5 = R_5 = CH_3$ 
 $R_7 = R_7 = TBDMS$ 
 $R_7 = R_7 = CH_7$ 
 $R_7 = C$ 

OR<sub>2</sub>

16a, 
$$R_1 = R_2 = R_3 = CH_3$$

b,  $R_1 = TBOMS$ ,  $R_2 = R_3 = CH_3$ 

d,  $R_1 = CH_3$ ,  $R_2 = R_3 = TBDMS$ 

f,  $R_1 = R_2 = R_3 = TBDMS$ 

OR<sub>3</sub>

h,  $R_1 = R_2 = TBDMS$ ,  $R_3 = CH_3$ 

J  $R_1 = R_2 = CH_3$ ,  $R_3 = TBDMS$ 

16b,d,f,h,j 
$$\xrightarrow{d}$$
  $\xrightarrow{OR_2}$   $\xrightarrow{C_1}$   $\xrightarrow{R_1}$  =  $\xrightarrow{CH_3}$ ,  $\xrightarrow{R_2}$  =  $\xrightarrow{R_3}$  =  $\xrightarrow{CH_3}$   $\xrightarrow{R_1}$  =  $\xrightarrow{CH_3}$ ,  $\xrightarrow{R_2}$  =  $\xrightarrow{R_3}$  =  $\xrightarrow{R_3}$  =  $\xrightarrow{R_1}$  =  $\xrightarrow{R_2}$  =  $\xrightarrow{R_3}$  =  $\xrightarrow{R_3}$  =  $\xrightarrow{R_3}$  =  $\xrightarrow{R_3}$  =  $\xrightarrow{R_1}$  =  $\xrightarrow{R_2}$  =  $\xrightarrow{R_3}$  =  $\xrightarrow{R_3$ 

15b d HO OCH<sub>3</sub>

2a, R = H, Y = cis-CH=CH b, R = P(O)(ONa)<sub>2</sub>, Y = cis-CH=CH c, R = H, Y = CO